



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D2571

Job Sheet 184657



Part No: D2571

Job Qty: 4 ea

DAS
21
9-89

Part Name: Saddle, Fwd, Out



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 10/15/18

Job Tracking No:

Due Date: 11/2/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV F IPP: 1 02.10.02 Re-format; Change to Dwg Rev. D & incorporated D2572 KJ

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea	11/2/18	11/2/18	0.00	0.00	Start Up Machining		18/11/19
100	CNC Vertical Machining	4 pcs	11/2/18	11/2/18	0.57	6.45	HAAS 1		11/11/18
110	Mill Conv	4 pcs	11/2/18	11/2/18	0.00	0.62	Mill Conv 1		11/11/18
120	QC	4 pcs	11/2/18	11/2/18	0.00	0.00	QC2		11/11/18
130	QC	4 pcs	11/2/18	11/2/18	0.00	0.00	QC8		11/11/18
140	HandFinish	4 pcs	11/2/18	11/2/18	0.00	0.13	HandFinish1		11/11/18
150	Powdercoat	4 pcs	11/2/18	11/2/18	0.00	0.16	Powdercoat1		11/11/18
160	QC	4 pcs	11/2/18	11/2/18	0.00	0.00	QC3		11/11/18
170	Packaging	4 pcs	11/2/18	11/2/18	0.00	0.00	Packaging3		11/11/18
180	QC21-SA	4 Ea	11/2/18	11/2/18	0.00	0.00	QC21		11/11/18

Part Op 100 - Program Batch No. SD24389 Double check by: ML 1-Machine Step No 1 per Folio FA051 and inspect per
Descriptions: attached Dimension Sheets 2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets 3-Machine
Step No 3 per Folio FA051 and inspect
110 - Machine keyway as per dwg D2571 & D2572
120 - Inspect on CMM as per folio CMM022.
150 - START TIME: 9:40 FINISH TIME: 8:10 O.T. 3:30 11/30/18

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6101-007	Saddle Billet	4 Ea (1 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6101-007	4	27	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Saddle, Fwd Outboard	0.438Inches + 0.005 - 0.000	0.443 0.438		
2	Saddle, Fwd Outboard	1.745Inches + 0.010 - 0.000	1.755 1.745		
3	Saddle, Fwd Outboard	3.495Inches	3.505		

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS			
	Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐		

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
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Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

DART Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com



Container No: S124389



Part: D2571

Job No: 184657

Serial No/Batch: S124389

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 11/04/18

FAULT CATEGORY

ect te/Unqualified	☐ Power Loss/Surge	☐ Positioned Wrong
	☐ Folio/Program	☐ Outside Dimensions
	☐ Grain	☐ Over/Under tolerance
	☐ Weld	☐ Part Incorrect
	☐ Wrong Stock Pulled	☐ Part Lost/Missing
	☐ Out of Sequence	☐ Part Moved
	☐ Off-set	☐ Drawing
	☐ Misabeled	☐ Finish
ete/Unclear	☐ Fit/Function	☐ Misread
	☐ Misaligned/off center	☐ Turning Sequence

			+ 0.010 - 0.000	3.495
4	Saddle, Fwd Outboard	1.745Inches	+ 0.010 - 0.000	1.755 1.745
5	Saddle, Fwd Outboard	7.990Inches	+ 0.020 - 0.000	8.010 7.990
6	Saddle, Fwd Outboard	0.490Inches	+ 0.020 - 0.000	0.510 0.490
7	Saddle, Fwd Outboard	0.257Inches	+ 0.005 - 0.000	0.262 0.257
8	Saddle, Fwd Outboard	0.375Inches	+ 0.005 - 0.000	0.380 0.375
9	Saddle, Fwd Outboard	0.490Inches	+ 0.020 - 0.000	0.510 0.490
10	Saddle, Fwd Outboard	1.174Inches	+ 0.010 - 0.000	1.184 1.174
11	Saddle, Fwd Outboard	0.558Inches	+ 0.020 - 0.000	0.578 0.558
12	Saddle, Fwd Outboard	1.174Inches	+ 0.010 - 0.000	1.184 1.174
13	Saddle, Fwd Outboard	1.490Inches	+ 0.010 - 0.000	1.500 1.490
14	Saddle, Fwd Outboard	2.495Inches	+ 0.010 - 0.000	2.505 2.495
15	Saddle, Fwd Outboard	3.869Inches	+ 0.010 - 0.000	3.879 3.869
16	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
17	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
18	Saddle, Fwd Outboard	0.240Inches	+ 0.020 - 0.000	0.260 0.240
19	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
20	Saddle, Fwd Outboard	0.178Inches	+ 0.020 - 0.000	0.198 0.178
21	Saddle, Fwd Outboard	2.940Inches	+ 0.040 - 0.000	2.980 2.940
22	Saddle, Fwd Outboard	0.230Inches	+ 0.020 - 0.000	0.250 0.230
23	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
24	Saddle, Fwd Outboard	0.308Inches	+ 0.005 - 0.000	0.313 0.308
25	Saddle, Fwd Outboard	0.760Inches	+ 0.005 - 0.000	0.765 0.760
26	Saddle, Fwd Outboard	0.352Inches	+ 0.020 - 0.000	0.372 0.352
27	Saddle, Fwd Outboard	0.470Inches	+ 0.060 - 0.000	0.530 0.470
28	Saddle, Fwd Outboard	0.615Inches	+ 0.020 - 0.000	0.635 0.615
29	Saddle, Fwd Outboard	0.053Inches	+ 0.020 - 0.000	0.073 0.053
30	Saddle, Fwd Outboard	0.240Inches	+ 0.020 - 0.000	0.260 0.240
31	Saddle, Fwd Outboard	1.375Inches	+ 0.020 - 0.000	1.395 1.375
32	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
33	Saddle, Fwd Outboard	0.240Inches	+ 0.040 - 0.000	0.280 0.240
34	Saddle, Fwd Outboard	0.240Inches	+ 0.020 - 0.000	0.260 0.240
35	Saddle, Fwd Outboard	2.000Inches	+ 0.020 - 0.000	2.020 2.000

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS							
	Rework	☐	Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
	Scrap	☐	Machining	☐	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐
	Use-as-is	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
	Suspected Unapproved	☐	Large Fab	☐	Composite	☐	Supplier	☐		

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
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Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause			FAULT CATEGORY		
Environment	☐	No Re-verification	☐	Pressure/Forced	☐
Design	☐	Operator	☐	Bending	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐
Material	☐	Use for Testing	☐	Cuffs	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐
Past Expiry Date	☐	Manufacturing Process	☐		
Misidentified	☐	Past Due	☐	OTHER :	

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Saddle, Fwd Outboard

0.023Inches + 0.020
- 0.000

0.043
0.023

Plex 10/15/18 2:54 PM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

DART AEROSPACE LTD	Work Order: 184657
Description: Saddle, Fwd Outboard	Part Number: D2571
Inspection Dwg: D2571 Rev. F	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1	2	3	4		
A	0.438	0.443		0.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		7.998	8.000	8.000	8.000		
F	0.490	0.510		0.500	.497	.498	.497		
G	0.257	0.262		0.257	.257	.257	.257		
H	0.375	0.380		0.375	.375	.375	.375		
I	0.490	0.510		0.4985	.500	.500	.499		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		0.567	.567	.567	.566		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		0.135	.135	.135	.135		
Q	0.115	0.135		0.132	.127	.127	.126		
R	0.240	0.260		0.258	.253	.253	.252		
S	0.115	0.135		0.138	.131	.130	.130		
T	0.178	0.198		0.188	.188	.188	.188		
U	2.940	2.980		2.964	2.964	2.962	2.960		
V	0.230	0.250	.246	0.258	.246	.245	.246		
W	0.115	0.135		0.128	.122	.122	.124		
X	0.308	0.313		.311	.312	.310	.310		
Y	0.760	0.765		.760	.760	.760	.760		
Z	0.352	0.372		0.3635	.363	.366	.366		
AA	0.470	0.530		0.500	.500	.500	.500		
AB	0.615	0.635		0.627	.625	.625	.626		
AC	0.053	0.073		0.065	.063	.060	.065		
AD	0.240	0.260		0.256	.254	.255	.256		
AE	1.375	1.395		1.3879	1.383	1.385	1.385		
AF	0.115	0.135		0.134	.135	.133	.135		
AG	0.240	0.280		0.250	.250	.255	.250		
AH	0.240	0.260		0.250	.253	.251	.254		
AI	2.000	2.020		2.003	2.000	2.000	2.000		
AJ	0.023	0.043		.030	.033	.030	.030		
Accept/Reject									

Measured by:	57
Date:	9-89 18/11/07

Audited by:	<i>[Signature]</i>
Date:	18/11/12

Rev	Date	Change	Revised by	Approved
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	
F	13.03.07	Dwg Rev updated	KJ	<i>[Signature]</i>

DART AEROSPACE LTD	Work Order: 184657
Description: Saddle, Fwd Outboard	Part Number: D2571
Inspection Dwg: D2571 Rev. F	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	5 1	6 2	7 3	8 4	By	Date
A	0.438	0.443		.438	.438	.438	0.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		7.999	7.999	8.000	8.001		
F	0.490	0.510		.496	.497	0.496	.496		
G	0.257	0.262		.257	.257	.257	.257		
H	0.375	0.380		.375	.375	.375	.375		
I	0.490	0.510		.500	.499	.500	.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.567	.567	.566	.567		
L	1.174	1.184		1.174	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		.135	.135	.135	.135		
Q	0.115	0.135		.126	.125	.125	.125		
R	0.240	0.260		.251	.251	.251	.251		
S	0.115	0.135		.130	.130	.130	.130		
T	0.178	0.198		.188	.188	.188	.188		
U	2.940	2.980		2.962	2.962	2.960	2.960		
V	0.230	0.250		.246	.245	.245	.246		
W	0.115	0.135		.122	.122	.122	.122		
X	0.308	0.313		.310	.310	0.310	0.310		
Y	0.760	0.765		.760	.760	0.760	0.760		
Z	0.352	0.372		.364	.364	0.364	0.364		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.622	.624	0.625	0.628		
AC	0.053	0.073		.060	.055	.055	.055		
AD	0.240	0.260		.255	.255	.255	.255		
AE	1.375	1.395		1.383	1.385	1.385	1.385		
AF	0.115	0.135		.125	.135	0.135	0.125		
AG	0.240	0.280		.250	.250	0.250	0.250		
AH	0.240	0.260		.254	.255	0.250	0.250		
AI	2.000	2.020		2.000	2.000	2.000	2.000		
AJ	0.023	0.043		.033	.033	0.033	0.033		
Accept/Reject									

Measured by: DAS
Date: 57
9-89

Audited by: <i>Amf</i>
Date: 18/11/12

Rev	Date	Change	Revised by	Approved
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	
F	13.03.07	Dwg Rev updated	KJ	

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DART AEROSPACE LTD	Work Order: 184657
Description: Saddle, Fwd Outboard	Part Number: D2571
Inspection Dwg: D2571 Rev. F	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	9 1	10 2	11 3	12 4		
A	0.438	0.443		0.438	0.438	0.438	0.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.001	8.001	8.001	8.000		
F	0.490	0.510		0.499	0.500	0.506	0.505		
G	0.257	0.262		0.257	0.257	0.257	0.257		
H	0.375	0.380		0.375	0.375	0.375	0.375		
I	0.490	0.510		0.505	0.500	0.500	0.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		0.5685	0.565	0.566	0.566		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		0.135	0.135	0.135	0.135		
Q	0.115	0.135		0.126	0.126	0.126	0.126		
R	0.240	0.260		0.251	0.251	0.253	0.253		
S	0.115	0.135		0.133	0.130	0.130	0.130		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		0.247	0.247	0.244	0.245		
W	0.115	0.135		0.126	0.125	0.122	0.123		
X	0.308	0.313		0.310	0.310	0.310	0.310		
Y	0.760	0.765		0.760	0.760	0.760	0.760		
Z	0.352	0.372		0.363	0.362	0.363	0.364		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.626	0.626	0.629	0.629		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.257	0.256	0.256	0.256		
AE	1.375	1.395		1.385	1.385	1.385	1.385		
AF	0.115	0.135		0.125	0.135	0.135	0.135		
AG	0.240	0.280		0.250	0.250	0.250	0.250		
AH	0.240	0.260		0.250	0.250	0.250	0.250		
AI	2.000	2.020		2.000	2.000	2.000	2.000		
AJ	0.023	0.043		0.033	0.033	0.033	0.033		
Accept/Reject									

Measured by: DAS	Audited by: <i>[Signature]</i>
Date: 57	Date: 18/11/12
9-89	

Rev	Date	Change	Revised by	Approved
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	
F	13.03.07	Dwg Rev updated	KJ	<i>[Signature]</i>

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